

IN THE CLAIMS

1-186. (Cancelled)

187. (Previously presented) A method of transferring a data-carrying light beam, comprising:  
transmitting the data-carrying light beam through the atmosphere;  
directing a received beam including at least a portion of the transmitted beam into at least one fiber; and

changing the amplitude of the received beam directed into the at least one fiber, by a variable amplification or attenuation, using optical apparatus, wherein at least some of the amplitude changes comprise attenuations.

188. (Previously presented) A method according to claim 187, wherein changing the amplitude comprises changing by a factor determined responsive to an extent to which the received beam was affected by the atmosphere.

189. (Previously presented) A method according to claim 188, wherein changing the amplitude comprises changing by a factor determined responsive to an extent to which the received beam was affected by atmospheric turbulence.

190. (Previously presented) A method according to claim 187, wherein changing the amplitude comprises changing by a factor determined responsive to an average power level of the received beam.

191. (Currently amended) A method according to claim 187, comprising continuously determining thea momentary power of the received beam and wherein changing the amplitude of the received beam comprises changing the amplitude by a factor determined responsive to the determined momentary power of the received beam.

192. (Previously presented) A method according to claim 191, wherein determining the power of the received beam comprises passing a portion of the received beam to a light detector.

193. (Previously presented) A method according to claim 192, wherein passing the portion of the received beam to the light detector comprises passing a portion of the received beam after its amplitude is variably changed.

194. (Previously presented) A method according to claim 187, wherein changing the amplitude comprises providing, at an output of the optical apparatus, a light beam with a substantially constant power.

195. (Previously presented) A method according to claim 187, wherein a rate of variation of the amplification or attenuation of the optical apparatus which performs the amplitude change is at least 1 kHz.

196. (Previously presented) A method according to claim 187, wherein a rate of variation of the amplification or attenuation of the optical apparatus which performs the change is at least 50 Hz.

197. (Previously presented) A method according to claim 187, wherein changing the amplitude comprises amplifying or attenuating by an optical amplifier.

198. (Previously presented) A method according to claim 195, wherein changing the amplitude comprises attenuating by an optical attenuator.

199. (Currently amended) A method according to claim 187, comprising additionally passing the received beam through an additional optical apparatus which ~~amplifies~~ changes the amplitude of the received beam.

200. (Previously presented) A method according to claim 199, wherein the additional optical apparatus changes the amplitude of the received beam by a constant gain.

201. (Previously presented) A method according to claim 187, wherein transmitting the light beam through the atmosphere comprises transmitting outdoors.

202. (Previously presented) A method according to claim 187, wherein transmitting the light beam

through the atmosphere comprises transmitting over a distance of at least 100 meters.

203. (Previously presented) A method according to claim 202, wherein transmitting the light beam through the atmosphere comprises transmitting over a distance of at least 1000 meters.

204. (Previously presented) A method according to claim 187, wherein changing the amplitude by optical apparatus comprises changing by optical apparatus having a variable amplification or attenuation with a dynamic range of at least about 30dB.

205. (Previously presented) A method according to claim 187, wherein the data-carrying light beam carries data in a plurality of distinct wavelengths.

206. (Previously presented) A method according to claim 187, wherein directing a received beam into at least one fiber comprises directing the received beam into a single mode fiber.

207. (Previously presented) A method according to claim 187, wherein the optical apparatus has a high amplification or attenuation variation rate, suitable for automatic gain control (AGC) of the beam received from the atmosphere.

208. (Previously presented) A method according to claim 207, wherein the amplification or attenuation of the optical apparatus has a variation rate higher than 1 kHz.

209. (Previously presented) A method according to claim 187, wherein the optical apparatus is effectively operative over a bandwidth of at least 40 nm.

210. (Previously presented) A method of processing a data-carrying light beam, comprising:  
receiving a light beam from the atmosphere; and  
passing the beam through an optical amplitude modifier having a variable amplification or attenuation with a dynamic range of at least about 30dB.

211. (Previously presented) A method according to claim 210, wherein passing the beam through an optical amplitude modifier comprises variably changing the amplitude of the beam by the amplitude

modifier.

212. (Previously presented) A method according to claim 210, wherein the data-carrying light beam carries data in a plurality of distinct wavelengths.

213. (Previously presented) A method according to claim 212, wherein the optical amplitude modifier provides for each distinct wavelength a beam with a substantially constant average amplitude.

214. (Previously presented) A method according to claim 210, wherein the optical amplitude modifier comprises an optical attenuator.

215. (Previously presented) A method according to claim 210, wherein passing the beam through an optical amplitude modifier comprises providing, at an output of the optical amplitude modifier, a light beam with a substantially constant power.

216. (Previously presented) A method according to claim 210, wherein the optical amplitude modifier is effectively operative over a bandwidth of at least 40 nm.

217. (Previously presented) A method of transmitting a data-carrying light beam, comprising:  
transmitting the data-carrying light beam through the atmosphere;  
directing a received beam including at least a portion of the transmitted beam into at least one fiber; and

changing the amplitude of the received light beam directed into the at least one fiber, by a variable amplification or attenuation, using optical apparatus having a high amplification or attenuation variation rate, suitable for automatic gain control (AGC) of the beam received from the atmosphere.

218. (Previously presented) A method according to claim 217, wherein the amplification or attenuation of the optical apparatus has a variation rate higher than 1 kHz.

219. (Previously presented) A method according to claim 217, wherein the data-carrying light beam

carries data in a plurality of distinct wavelengths.

220. (Previously presented) A method according to claim 217, wherein the optical apparatus has a variable amplification or attenuation with a dynamic range of at least about 30dB.

221. (Previously presented) A method according to claim 217, wherein changing the amplitude of the beam comprises providing, by the optical apparatus, a light beam with a substantially constant power.

222. (Previously presented) A method according to claim 217, wherein changing the amplitude of the beam comprises attenuating the amplitude of the beam.

223. (Previously presented) A method according to claim 217, wherein the optical apparatus is effectively operative over a bandwidth of at least 40 nm.

224. (Previously presented) An optical wireless transceiver, comprising:

- an optical receiver adapted to receive a data-carrying light beam from the atmosphere; and
- an optical amplitude modifier adapted to change the amplitude of the received light beam, by a variable amplification or attenuation, so as to substantially eliminate effects of atmospheric turbulence from the received beam.

225. (Previously presented) A transceiver according to claim 224, wherein the optical amplitude modifier is adapted to process light beams including multi wavelength light beams.

226. (Previously presented) A transceiver according to claim 225, wherein the optical amplitude modifier has a high amplification or attenuation variation rate.

227. (Previously presented) A transceiver according to claim 226, wherein the optical amplitude modifier provides a light beam in which at least one of the wavelengths has a substantially constant power.

228. (Previously presented) A transceiver according to claim 227, wherein the optical amplitude

modifier provides a light beam in which each of the wavelengths has a substantially constant power.

229. (Previously presented) A transceiver according to claim 224, wherein the optical amplitude modifier comprises an optical attenuator.

230. (Previously presented) A transceiver according to claim 224, wherein the optical amplitude modifier has an effective bandwidth of at least 40 nm.

231. (Previously presented) A transceiver according to claim 224, comprising an optical transmitter adapted to re-transmit light beams processed by the optical amplitude modifier.

232. (Previously presented) A transceiver according to claim 231, wherein the optical transmitter is adapted to transmit the processed light beams to the atmosphere.

233. (Previously presented) A method of transferring a data-carrying light beam, comprising:  
transmitting a data-carrying light beam including one or more wavelengths through the atmosphere;

directing a received beam including at least a portion of the transmitted beam into at least one fiber; and

passing the beam directed into the at least one fiber through an optical amplitude modifier adapted to change the amplitude of the beam by a variable amplification or attenuation, so as to provide a light beam in which each of the one or more wavelengths has a substantially constant power.

234. (Previously presented) A method according to claim 233, wherein the optical amplification modifier is effectively operative over a bandwidth of at least 40 nm.

235. (Previously presented) A method according to claim 234, wherein the optical amplification modifier has a high amplification or attenuation variation rate.

236. (Previously presented) A method according to claim 233, wherein the optical amplification modifier has an amplification or attenuation with a variation rate of at least 1 kHz.

237. (Previously presented) A method according to claim 233, wherein the received beam comprises a plurality of data carrying wavelengths.

238. (Previously presented) A method according to claim 233, wherein passing the beam through an optical amplitude modifier comprises passing the beam through a saturated optical amplifier.

239. (Previously presented) A method according to claim 238, wherein passing the beam through a saturated optical amplifier comprises passing the received beam through an erbium doped fiber amplifier (EDFA).

240. (Previously presented) An optical wireless transceiver, comprising:

at least one fiber adapted to receive a data-carrying light beam from the atmosphere;

an optical amplitude modifier adapted to change the amplitude of the received light beam, by a variable amplification or attenuation, wherein at least some of the amplitude changes comprise attenuations.

241. (Previously presented) A transceiver according to claim 240, wherein the optical amplitude modifier is adapted to process light beams carrying data in a plurality of distinct wavelengths.

242. (Previously presented) A transceiver according to claim 241, wherein the optical amplitude modifier provides a light beam in which at least one of the wavelengths has a substantially constant power.

243. (Previously presented) A transceiver according to claim 242, wherein the optical amplitude modifier provides a light beam in which each of the wavelengths has a substantially constant power.

244. (Previously presented) A transceiver according to claim 240, wherein the optical amplitude modifier comprises an optical attenuator.

245. (Previously presented) A transceiver according to claim 240, wherein the optical amplitude modifier has an effective bandwidth of at least 40 nm.

185/02360 A02

246. (Previously presented) A transceiver according to claim 240, wherein the optical amplitude modifier has a high amplification or attenuation variation rate.